

ABSTRACT OF THE DISCLOSURE

A high-pressure discharge lamp is effective to prevent initial blackening on an outer casing thereof, is of a long service life, and can easily be manufactured. A tungsten wire is wound as a double coiled winding around an electrode metal rod, leaving a tip end thereof, and the double coiled winding is machined into a melted tip end by a YAG laser beam, with the remaining double coiled winding used as a coil. The left tip end of the metal rod is machined into a nipple on the distal end of the melted tip end. If it is assumed that the melted tip end has a diameter $D1$ and a length $L1$ up to its distal end, the nipple has a proximal end having a diameter $D2$ and a length $L2$ from the proximal end up to the distal end thereof, and the coil and the melted tip end (including the nipple) have a volume $V1$ and the melted tip end (including the nipple) has a volume $V2$, then the electrode assembly is machined to satisfy at least one of the conditions $0.15 \leq D2/D1 \leq 0.3$, $0.2 \leq L2/L1 \leq 0.4$, and $0.2 \leq V2/V1 \leq 0.4$. The machined electrode assembly is incorporated as an electrode into a lamp bulb.